SHARP Environmental Engineers and Scientists
AND ASSOCIATES, INC.
982 Crupper Avenue
Columbus, Ohio 43229
(614) 841-4650
Fax (614) 841-4660

November 18, 2002

Ms. Nancy Lou Minkler
Remedial Project Manager
Arizona Department of Environmental Quality
3033 North Central Avenue
Phoenix, AZ 85012

Subject: Transmittal of October 2002, Monthly Progress Report
Phoenix-Goodyear Airport (PGA) Site, Goodyear, Arizona

Dear Ms. Minkler:

Attached is the monthly progress report for October 2002, for the PGA site in Goodyear, Arizona. This report is being submitted on behalf of The Goodyear Tire & Rubber Company (GTRC) to fulfill the reporting requirements outlined in the Consent Decree. Activities conducted this month included:

- continuing operation of the three groundwater treatment systems;
- collecting monthly effluent samples;
- sampling PMW-15 and PMW-16 to evaluate progress of the sparging;
- operating the Air Sparging/SVE (AS/SVE) system;
- meeting with the new EPA Remedial Project Manager and ADEQ at the site on October 3, 2002; and
- continuing operation of E-17 without chromium treatment with sampling of the extraction wells and the effluent (began June 18, 2001).

If you have any questions, please feel free to call me at (614) 841-4650.

Sincerely,

SHARP AND ASSOCIATES, INC.

Todd Struttmann, P.E.
Principal

cc: J. Sussman, Goodyear Tire & Rubber Company
J. Sickles, USEPA
C. Prokop, USEPA
M. Bolitho, Arizona Department of Water Resources
S. Zachary, Haley-Aldrich, Inc.
M. Sarmiento, BEW Systems, Inc.
R. Bartholomew, Bartholomew Engineering

Performance Measurement Tracking Log
Project Manager Input Form

PERIOD COVERED: October 2002
DATE DUE: November 15, 2002

ADMINISTRATIVE INFORMATION:

1. Main Site Code: **41-0000-02**
1a. Facility Site Code:
2. Site Name **Phoenix Goodyear Airport (south)**
3. Project Manager: **Nancy Lou Minkler**
4. Funding Type: **CERCLA- consent decree required**

Technical Information

5. DEQ Site Visits (RPM & Hydro)	0	6. Meetings w/Ips	0
7. Public Meetings Held	0	8. Fact Sheets on a site	
9. Water Samples Taken (DEQ/EPA)	30	10. Water Samples Taken (IP)	30
11. Soil/Soil Gas Samples Taken (DEQ/EPA)		12. Soil/Soil Gas Samples Taken (IP)	0
13. Air Samples Taken (DEQ/EPA)	0	14. Air Sample Taken (IP)	0
15. Ground Water Wells Installed (DEQ) Date Installed ___/___/___		16. Ground Water Wells Installed (IP)	0
17. Soil Vapor Wells Installed (DEQ) Date Installed ___/___/___	0	18. Soil Vapor Wells Installed (IP) Date Installed ___/___/___	0
19. Abandoned Ground Water Wells Date Abandoned ___/___/____	0	20. Abandoned Other Wells Date Abandoned ___/___/___	0
21. Remedial Investigation (started) overall area and/or facilities (see comments).	0	22. Remedial Investigations (completed)	0
23. Date Risk Assessment Completed	0	24. Date Feasibility Study Underway ___/___/___	0
25. Date Feasibility Study Went Underway	0	26. Remedial Design 10% 30% 60%	100%
27. Construction Start Date ___/___/___	0	28. Technology Used: pump and treat for water (air stripper Subunit A/GAC for Subunit C), SVE for Soil	
29. Treatment Plant Start Date 12/89 Subunit A; 2/94 North Subunit C; 10/94 South Subunit C		30. Date Remedial Action Completed ___/___/___	
31. Gallons Water Treated (VOCs) Subunit A 18,700,000 Southern Subunit C 7,300,000 Northern Subunit C 7,300,000		32. Hazardous Substance Removed (VOCs) in GW Treatment	26.98
33. Gallons Water Treated (metals)	0	34. Hazardous Substance Removed (metals)	0
35. Gallons Water Treated (other)	0	36. Hazardous Substance Removed (other)	0 lbs
37. Tons Soil Treated On-Site 0 (tons) 1 cy = 1 ton	0	38. Tons Soil Taken Off-site	0 (tons)
39. Acres Remediated		40. End Use of Water - (reinjection)	
41. Estimated reject Completion Date		42. Actual Completion Date ___/___/___	

TO:	Nancy Lou Minkler, Remedial Project Manager Arizona Department of Environmental Quality (ADEQ)
FROM:	Jeff Sussman, Project Manager The Goodyear Tire & Rubber Company (GTRC)
SUBJECT:	October 2002 Monthly Progress Report, Phoenix-Goodyear Airport (PGA) Site in Goodyear, Arizona
DATE:	November 15, 2002

CURRENT ACTIVITIES

This monthly report describes PGA site activities conducted during October 2002. Notable activities are described below or detailed in the sections that follow. Activities this month included:

- continuing operation of the three groundwater treatment systems;
- collecting monthly effluent samples;
- sampling PMW-15 and PMW-16 to evaluate progress of the sparging (October 2nd);
- operating the Air Sparging/SVE (AS/SVE) system;
- meeting with the new EPA Remedial Project Manager and ADEQ at the site on October 3, 2002; and
- continuing operation of E-17 without chromium treatment with sampling of the extraction wells and the effluent (began June 18, 2001).

Trichloroethene (TCE) was detected in well COG#11 on December 19, 1997. GTRC agreed to continue sampling the well on a monthly basis until the Northern Subunit C delineation is complete and an extraction system in place. The sample collected from COG #11 on October 10, 2002, resulted in a non-detect at <1.0 µg/L for TCE.

OUTSTANDING ISSUES/RESOLUTIONS

To complete the extraction well network for capture of the Northern Subunit C plume, GTRC needs an additional extraction well north of Yuma Road. GTRC is working with the City of Goodyear for potential beneficial reuse of water from this additional extraction well. GTRC, USEPA, ADEQ, City of Goodyear and the off site landowner met to discuss access. A subsequent meeting with the landowner is scheduled for November 21st.

PLANS FOR THE NEXT MONTH

Plans for November 2002 include:

- continuing operation of the Subunit A treatment system, the Northern Subunit C treatment system, and the Southern Subunit C treatment system;
- continuing operation of E-17 without chrome treatment and collecting samples of the extraction wells and system effluent to confirm compliance with the discharge permit;
- submitting a request to ADEQ and EPA to demolish the inactive chrome system (November 1st);
- meeting with USEPA, ADEQ, City of Goodyear and the off site property owner to discuss access for extraction well E-102 (November 6th);
- Follow-up meeting with off-site property owner to negotiate terms of access agreement (Nov. 21); and
- further increasing the sparging rates of the SVE system (November 1st).

Air Sparging/SVE in Infield

The SVE system was started up on November 29, 2001 and the air sparging commenced on November 30, 2001. Activities this month are summarized below.

- During October 2002, approximately 4.5 lbs of VOCs were removed from the system bringing the cumulative removal to ~ 128 lbs.
- Free product has not been observed in the wells monitored.
- On November 1, 2002, air sparging rates were increased from 22 ACFM to 25 ACFM in wells ASI-1, ASI-2 and ASI-3.
- The system operational uptime for October 2002 was 100% bringing the cumulative uptime to 93.8%.

Ground water samples collected in October 2002 indicate decreasing concentration in ground water samples compared to previous quarters. Since February 2002, ground water concentrations of TCE have decreased in PMW-3 approximately 40% (from 87 ug/L to 51 ug/L), PMW-14 approximately 10% (From 81 to 72.1ug/L), PMW-15 approximately 28% (From 210 to 150 ug/L) and PMW-16 approximately 17% (From 130 to 108 ug/L). These concentration decreases are interpreted to be the result of sparging in the vicinity of these wells. TCE concentrations in wells PMW-15 and PMW-16 are being sampled monthly to track the progress of the cleanup. Samples from PMW-15 and PMW-16 are scheduled to be collected in November.

CHROMIUM MANAGEMENT APPROACH

As part of the chrome management approach, well E-17 was placed on-line without chrome treatment on June 18, 2001 and weekly sampling commenced for 3 weeks and then reverted to monthly. The analytical results for the last six months are presented in the table below.

Extraction Well	5/9/02 CRT* (mg/L)	6/14/02 CRT* (mg/L)	7/16/02 CRT* (mg/L)	8/14/02 CRT (mg/L)	9/10/02 CRT (mg/L)	10/7/02 CRT (mg/L)
NE-1	NA	NA	NA	NA	NA	0.058
NE-2	NA	0.030	0.027	NA	NA	0.012
NE-3	NA	0.019	0.013	NA	NA	0.011
NE-4	NA	0.029	0.028	NA	NA	0.030
NE-5	NA	0.171	0.127	NA	NA	0.127
E-7R	0.233	0.280	0.282	0.233	0.258	0.239
E-8	NA	0.008	0.065	NA	NA	0.056
E-10	NA	NA	0.008	NA	NA	0.009
E-11	NA	0.047	0.043	NA	NA	0.037
E-12	0.157	0.192	0.204	0.171	0.181	0.184
E-16	NA	NA	NS	NA	NA	NS
E-17	0.179	0.188	0.153	0.139	NS	NS
Air stripper Effluent predicted (a)	0.089	0.079	0.095	0.079	0.081	0.084
Air stripper Effluent actual	0.065	0.083	0.081	0.065	0.088	0.086

*CRT – total chromium results by method EPA 200.7. All the samples were digested prior to analysis as required by the method.
NS – not sampled due to well off line.
NA – not analyzed as per sampling program
(a) – the predicted effluent concentration is based on a mass weighted average from the individual extraction wells.

Originally, the chrome system was scheduled to be dismantled in May 2002 following a year of chrome monitoring. Based on discussions with EPA and ADEQ, the chrome management will continue until November 2002. GTRC provided a letter request for demolition of the chrome system on November 1, 2002, with a target for demolition in November pending analytical results.

NORTHERN SUBUNIT C TREATMENT SYSTEM OPERATION

Operation of the Northern Subunit C system continued during October 2002. A total of 7.3 million gallons (MG) of water was extracted. The system operated 31 days out of 31 days in October. The treatment system influent sample contained TCE at a concentration of 2.7 µg/L (10/11/02), yielding a calculated mass removal this month of 0.16 lbs. Total mass removed to date by the system is 20.40 lbs. TCE was detected in the sample collected between the carbon vessels at 2.2 µg/L.

Production for October 2002 was as follows:

Wells **Injection Wells**	**Production (MG)**	**Average Rate (gpm)**	**Days On/Uptime Rate (days/gpm)**
I-101	*	*	
I-102	*	*	
Total Injected	*	*	**31****
Extraction wells			
E-101	2.8	62.7	**31/62.7**
GAC#2 **	4.5		**33/94.7**
Total Extracted	**7.3**		

* Injection well flow meter not operating correctly and is reporting erroneous data
** Total flow based on 10/02/02 to 11/4/02

SOUTHERN SUBUNIT C TREATMENT SYSTEM OPERATION

A total of 7.3 MG of water was extracted from the Southern Subunit C treatment system during October 2002. The system operated 29 days out of a possible 31 days. The October inlet sample contained TCE at 7.2 µg/L (10/11/02) yielding a calculated mass removal for TCE during October of 0.44 lbs. Total mass removed to date by the Southern Subunit C system is 152.03 lbs. The TCE result was 2.0 µg/L in the sample collected between the carbon vessels. Based on the prior history of this unit, the predicted date for carbon changeout will be in December.

The Southern Subunit C system was offline for < 2 days due to faults with the system PLC controller. The faults were cleared and the system operation was restored within the 48 hr offline reporting window. The E-202 extraction well was taken offline on October 12th through October 31st to replace the motor bearings and pump checkout.

The table below shows the carbon change out history for the Southern Subunit C system:

Vessel Flow Configuration*	Operational Dates	Time to Detect TCE >5 µg/l**	Time Before Required Change out
A/B	Startup (10/94) –6/95	6 months	8 months
A'/B	6/95 – 12/95	3 months	6 months
A''/B	12/95 – 10/96	8 months	10 months
B/A''	10/96-1/22/97	1 month	3 months
A''/B'	1/22/97-10/30/97	9 months	10 months
B'/A'''	10/31/97 – 6/22/98	7 months	8 months
A'''/B''	6/22/98 – 8/25/99	12 months	14 months
B'''/A'''	8/25/99 – 10/4/00	13 months	13 months
A''''/B'''	10/4/00- 10/17/01	12 months	12 months
B''''/A''''	10/17/01- present	>12 months	TBD

* Vessel contents A - virgin coal based carbon
B - virgin coal based carbon
A' - on site regenerated coal based carbon
A''- coconut based carbon (applies to A''', A'''')
B' - coconut based carbon (applies to B'', B''', and B'''')
** The detection limit is 1 µg/L; the action level is 5 µg/L detected between the vessels; detection at this level initiates the planning process for the next change out. Time is presented in months after change out.

Production for the Southern Subunit C system in October 2002 is as follows:

Extraction Wells	Production (MG)	Average Rate(gpm)	Days On/Avg.Rate (days/gpm)
E-201	5.4	121.0	29/129.3
E-202	1.9	42.6	12/109.9
E-203	WELL REMOVED	FROM SERVICE	
Totals	**7.3**	**163.5**	**29/174.8**
Injection Wells	**Production (MG)**	**Average Rate(gpm)**	**Days On/Avg.Rate (days/gpm)**
I-201	3.8	85.1	29/90.9
I-202	3.6	80.6	29/86.2
I-203	0.9	20.2	29/21.6
Totals	**8.2**	**183.7**	**29/196.4**

SUBUNIT A TREATMENT SYSTEM OPERATION

A total of 18.7 MG of water was treated at the Subunit A system in October 2002. The Subunit A extraction system operated at an uptime rate of 443.2 gpm for 29.3 of 31 days this month. The treatment system influent sample contained TCE at a concentration of 169.0 µg/L (10/11/02) yielding a calculated mass removal of 26.38 lbs for the month of October. The cumulative total TCE mass removed by the Subunit A treatment system to date is 4,481.82 lbs. The TCE result in the effluent sample taken from the air stripper tower at the Subunit A Treatment System was 1.4 µg/L. This result will be monitored to determine if the result was an anomaly or if there are issues with the blower or efficiency degradation of the air stripping tower.

The Subunit A system was offline for 1.7 days throughout the month due to problems with the control room air conditioning unit, changing of the blower belts, replacement of piping for the pH controller and checking the air compressor voltages and loads.

Production for the Subunit A system in October 2002 is as follows:

Extraction Wells	Production (MG)	Average Rate (gpm)	On time Days/Rate (gpm)
Total Extracted	**18.7**		**29.3/443.2**
Total Injected	**17.8**		**29.3421.8**

- The differences between total extracted and total injection is due to evaporation across the air stripper and meter variances.